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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,068	04/04/2005	Naoki Okamoto	1254-0257PUS1	2375
2292 7590 10/18/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER NGUYEN, SIMON	
			ART UNIT 2618	PAPER NUMBER
			NOTIFICATION DATE 10/18/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

## Office Action Summary

Application No.

10/507,068

Applicant(s)

OKAMOTO ET AL.

Examiner

SIMON D. NGUYEN

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 8/9/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 1 is rejected under 35 U.S.C. 101 because the claimed invention is not supported by either an asserted utility or a well established utility.

The term "a first radio station....selecting and modulating only a subcarrier with which a desired transmission rate can be obtained in a second radio station" has not been supported in the claims on how the first radio station does in order to select and modulate a desired transmission rate. Since claim 1 is an independent claim, the claimed invention is required to be supported by a well established utility.

Claim 1 is also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either an asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. Furthermore, the limitation "a first and a second radio station" should change to "...first and second radio stations..". The limitation "carries out communication" has been repeated twice,.

Claim 2 recites the limitation "the received power"... "the interference power"" in a power detection means.....said second radio station is communicating;... There is insufficient antecedent basis for this limitation in the claim.

Claims 2, and 5, the limitations "a power detection means", "a notification means", and a subcarrier selection means", these should change to: power detection means, notification means, and.subcarrier selection means.

Claims 3-4, the terms "a or an" before means, for example an interference power determination means, a memory means, a calculation means, these terms should be deleted.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Hashem et al. (2006/0126493).

Regarding claim 1, Hashem discloses a system for selecting a subcarrier in a multiple subcarrier modulation, comprising: a base station and a remote station (fig.1), wherein the base station carries out communications by selecting and modulating only a subcarrier that accepts a transmission rate in the remote unit (fig.4, paragraph 25).

Regarding claim 2, Hashem further disclose wherein the remote unit comprises: power detection means for detecting a received power for each subcarrier and detecting an interference power from another radio station with which said the remote unit is communicating (Hashem discloses the measurement of signal quality and signal/interference which inherently related to a detecting power) (paragraphs 20, 24, 31); and notification means (return signal) for notifying said the base station of information regarding said received power and said interference power (S/I) detected by said detection means (step 98 of fig.3, 120 of fig.4, paragraphs 21-25), and wherein said the base station comprises: subcarrier selection means for selecting, based on a reception state and an interference state of each subcarrier that have been returned from said remote unit, only a subcarrier with which a desired transmission rate can be achieved in said remote unit, wherein only the subcarrier that has been selected by

said subcarrier selection means is selected and modulated for communication (figs.4, paragraphs 25).

Regarding claim 5, this claim is rejected for the same reason as set forth in claim 1 and 2.

Regarding claims 3-4, Hashem further discloses wherein said power detection means (subcarrier analysis processor 26) comprises interference power determination means that extracts or calculates the interference upon transmission of a notification signal from each of said grouped first radio stations one by one successively an interference power state for each subcarrier of said remote unit, and wherein said calculation means calculates a ratio of a desired wave power to an interference power for each subcarrier (paragraphs 20, 23, 31), it should be noted that Hashem discloses that each carrier is selected into an acceptable carrier group or an unacceptable carrier group and use a counter for counting the acceptable carrier and the unacceptable carrier, which means Hashem inherently discloses a memory for storing an acceptable subcarrier or an unacceptable carrier.

7. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Sano et al. (20040109419).

Regarding claim 1, Sano discloses a system for selecting a subcarrier in a multiple subcarrier modulation, comprising: a transmitting station and a receiving station (fig.1), wherein the transmitting station carries out communications by selecting and

modulating only a subcarrier that accepts a transmission rate in the remote unit (figs 23-24, paragraphs 177-181, 189).

Regarding claim 2, Sano further disclose wherein the receiving station comprises: power detection means for detecting a received power for each subcarrier and detecting an interference power from another radio station with which said the receiving station is communicating; and notification means (communication quality reporting unit 75) for notifying said the transmitting station of information regarding said received power and said interference power detected by said detection means (interference level estimation unit 37), and wherein said the base station comprises: subcarrier selection means for selecting, based on a reception state and an interference state of each subcarrier that have been returned from said remote unit, only a subcarrier with which a desired transmission rate can be achieved in said remote unit, wherein only the subcarrier that has been selected by said subcarrier selection means is selected and modulated for communication (figs. 23-24, paragraphs 173-181).

Regarding claim 5, this claim is rejected for the same reason as set forth in claim 1 and 2.

Regarding claims 3-4, Sano further discloses a power detector, a storage, and a calculator for detecting, storing, and calculating and reporting the calculated power to the base station (column 32, 73, 127-128, 132, 172, 174, 180-181), wherein the base station outputs only the data carried in the selected subcarriers designated by the hopping pattern as the subcarrier transmission signals (abstract).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (571) 272-7894. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (571) 272-7899.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

600 Dulany, Alexandria, VA 22314

Or faxed to:

(571) 273-8300 (for formal communications intended for entry)

Hand-delivered response should be brought to Customer Service Window located at the Randolph Building, 401 Dulany, Alexandria, VA, 22314.

Simon Nguyen

October 9, 2007

**SIMON NGUYEN**  
**PRIMARY EXAMINER**

